To: Program Executive, HyspIRI
        Program Scientist, HyspIRI

From: HyspIRI Mission Concepts Team, PI – ECOSTRESS

Subject: Response to "FY15 and FY16 Guidance for HyspIRI Study Team" regarding Guidance #5: Develop a plan for utilizing the ECOSTRESS mission results for HyspIRI risk reduction

The ECOSTRESS mission provides a unique opportunity to address important science questions as well as serve to reduce risk for HyspIRI mission operations and activities.

ECOSTRESS will be used to reduce risk for HyspIRI mission in several ways:

Calibration/Validation
- ECOSTRESS will establish multiple cal/val sites that can be leveraged for HyspIRI, including language for MOA that can be established with site PIs, as well as process for transferring data to HyspIRI ST;
- ECOSTRESS cal/val or data product algorithms can be leveraged for HyspIRI TIR data product development and quality control;
- ECOSTRESS data will be processed up to L4, facilitating and pre-empting this process for the HyspIRI TIR data stream (and can be used to demonstrate utility of HyspIRI TIR data at multiple levels)

Science
- ECOSTRESS will lay the foundation for demonstrating the science import and societal relevance of HyspIRI by advancing local-regional-near global scale understanding of vegetation water stress and utilizing this understanding to help improve drought monitoring and minimizing agricultural vulnerabilities;
- Build and reinforce the community of scientists who would utilize HyspIRI data
- The HyspIRI airborne campaign will produce simulated ECOSTRESS data products that can also be leveraged for regional science studies and cal/val

Applications
- Demonstrate timely and direct relevance to societal applications and benefit of HyspIRI by developing products and services that support agricultural management;
- Demonstrate proof of concept for applications of HyspIRI TIR data to water resources, wildfire behavior, and weather forecasting;
- Build and reinforce community of practitioners that benefit from a HyspIRI TIR datastream through establishing use cases and trial projects with ECOSTRESS